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TERMINAL (ENTER 1, 2, 3, OR ?):2

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NEWS
NEWS
         AUG 10
                 Time limit for inactive STN sessions doubles to 40
                 minutes
      3
         AUG 18
                 COMPENDEX indexing changed for the Corporate Source
NEWS
                  (CS) field
NEWS
         AUG 24
                 ENCOMPLIT/ENCOMPLIT2 reloaded and enhanced
NEWS
         AUG 24
                 CA/CAplus enhanced with legal status information for
                 U.S. patents
NEWS
         SEP 09
                 50 Millionth Unique Chemical Substance Recorded in
                 CAS REGISTRY
                 WPIDS, WPINDEX, and WPIX now include Japanese FTERM
NEWS
     7 SEP 11
                 thesaurus
NEWS 8 OCT 21
                 Derwent World Patents Index Coverage of Indian and
                 Taiwanese Content Expanded
NEWS 9
         OCT 21 Derwent World Patents Index enhanced with human
                 translated claims for Chinese Applications and
                 Utility Models
NEWS 10 NOV 23 Addition of SCAN format to selected STN databases
NEWS 11
         NOV 23 Annual Reload of IFI Databases
NEWS 12
         DEC 01 FRFULL Content and Search Enhancements
NEWS 13
         DEC 01 DGENE, USGENE, and PCTGEN: new percent identity
                 feature for sorting BLAST answer sets
NEWS 14
         DEC 02
                 Derwent World Patent Index: Japanese FI-TERM
                 thesaurus added
NEWS 15
         DEC 02
                 PCTGEN enhanced with patent family and legal status
                 display data from INPADOCDB
NEWS 16
         DEC 02
                 USGENE: Enhanced coverage of bibliographic and
                 sequence information
NEWS 17
         DEC 21
                 New Indicator Identifies Multiple Basic Patent
                 Records Containing Equivalent Chemical Indexing
                 in CA/CAplus
         JAN 12 Match STN Content and Features to Your Information
NEWS 18
                 Needs, Quickly and Conveniently
```

NEWS EXPRESS MAY 26 09 CURRENT WINDOWS VERSION IS V8.4, AND CURRENT DISCOVER FILE IS DATED 06 APRIL 2009.

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SINCE FILE TOTAL ENTRY SESSION 0.22 0.22

FULL ESTIMATED COST

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New CAS Information Use Policies, enter HELP USAGETERMS for details.

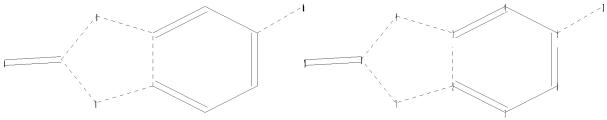
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http://www.cas.org/support/stngen/stndoc/properties.html

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chain nodes : 10 11 ring nodes : 1 2 3 4 5 6 chain bonds : 5-11 8-10 ring bonds : 1-2 1-6 2-3

2-7 3-4 3-9 4-5 5-6 7-8 8-9

exact/norm bonds :

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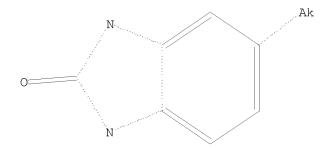
1-2 1-6 3-4 4-5 5-6

Match level:
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:CLASS
11:CLASS

L1 STRUCTURE UPLOADED

=> d L1 HAS NO ANSWERS

L1 STR



Structure attributes must be viewed using STN Express query preparation.

50 ANSWERS

=> s 11

SAMPLE SEARCH INITIATED 13:24:15 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 9126 TO ITERATE

21.9% PROCESSED 2000 ITERATIONS INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)

SEARCH TIME: 00.00.02

FULL FILE PROJECTIONS: ONLINE **COMPLETE**

BATCH **COMPLETE**

PROJECTED ITERATIONS: 176793 TO 188247

PROJECTED ANSWERS: 6323 TO 8643

L2 50 SEA SSS SAM L1

=> s 11 ful

FULL SEARCH INITIATED 13:24:19 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 183690 TO ITERATE

100.0% PROCESSED 183690 ITERATIONS 7659 ANSWERS SEARCH TIME: 00.00.05

L3 7659 SEA SSS FUL L1

=> fil caplus

COST IN U.S. DOLLARS
SINCE FILE TOTAL
ENTRY SESSION
FULL ESTIMATED COST
191.54
191.76

FILE 'CAPLUS' ENTERED AT 13:24:26 ON 20 JAN 2010 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT. PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

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FILE COVERS 1907 - 20 Jan 2010 VOL 152 ISS 4 FILE LAST UPDATED: 19 Jan 2010 (20100119/ED) REVISED CLASS FIELDS (/NCL) LAST RELOADED: Oct 2009 USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Oct 2009

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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s 13974 L3 T. 4

=> fil req COST IN U.S. DOLLARS

SINCE FILE TOTAL ENTRY SESSION FULL ESTIMATED COST 0.50 192.26

FILE 'REGISTRY' ENTERED AT 13:24:34 ON 20 JAN 2010 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT. PLEASE SEE "HELP USAGETERMS" FOR DETAILS. COPYRIGHT (C) 2010 American Chemical Society (ACS)

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New CAS Information Use Policies, enter HELP USAGETERMS for details.

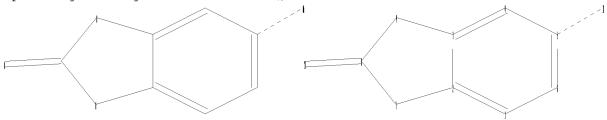
TSCA INFORMATION NOW CURRENT THROUGH June 26, 2009.

Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

http://www.cas.org/support/stngen/stndoc/properties.html

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chain nodes :
10 11

ring nodes :

1 2 3 4 5 6 7 8 9

chain bonds :
5-11 8-10
ring bonds :

1-2 1-6 2-3 2-7 3-4 3-9 4-5 5-6 7-8 8-9

exact/norm bonds :

2-7 3-9 5-11 7-8 8-9 8-10

normalized bonds :

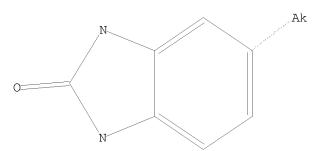
1-2 1-6 2-3 3-4 4-5 5-6

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:CLASS 11:CLASS

L5 STRUCTURE UPLOADED

=> d L5 HAS NO ANSWERS L5 STR



Structure attributes must be viewed using STN Express query preparation.

=> s 15

SAMPLE SEARCH INITIATED 13:25:07 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 9126 TO ITERATE

21.9% PROCESSED 2000 ITERATIONS INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED) SEARCH TIME: 00.00.01

50 ANSWERS

FULL FILE PROJECTIONS: ONLINE **COMPLETE**

BATCH **COMPLETE**

PROJECTED ITERATIONS: 176793 TO 188247 PROJECTED ANSWERS: 6323 TO 8643

L6 50 SEA SSS SAM L5

=> s 15 ful

FULL SEARCH INITIATED 13:25:10 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 183690 TO ITERATE

100.0% PROCESSED 183690 ITERATIONS 7659 ANSWERS

SEARCH TIME: 00.00.05

L7 7659 SEA SSS FUL L5

=> fil caplus

COST IN U.S. DOLLARS
SINCE FILE TOTAL
ENTRY SESSION
FULL ESTIMATED COST
191.54
383.80

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FILE COVERS 1907 - 20 Jan 2010 VOL 152 ISS 4
FILE LAST UPDATED: 19 Jan 2010 (20100119/ED)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Oct 2009
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Oct 2009

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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s 17

L8 974 L7

=> s 18 and benzimidazole
27787 BENZIMIDAZOLE
6678 BENZIMIDAZOLES
29310 BENZIMIDAZOLE
(BENZIMIDAZOLE OR BEN

(BENZIMIDAZOLE OR BENZIMIDAZOLES)

L9 232 L8 AND BENZIMIDAZOLE

=> s 19 and pentanoate

```
2028 PENTANOATE
            86 PENTANOATES
          2085 PENTANOATE
                 (PENTANOATE OR PENTANOATES)
L10
             0 L9 AND PENTANOATE
=> s 18 and benzimidazole-2-one-5-n-pentanoate
         27787 BENZIMIDAZOLE
          6678 BENZIMIDAZOLES
         29310 BENZIMIDAZOLE
                 (BENZIMIDAZOLE OR BENZIMIDAZOLES)
      10376058 2
       2973104 ONE
        211805 ONES
       3138602 ONE
                (ONE OR ONES)
       7229365 5
       3410058 N
          2028 PENTANOATE
           86 PENTANOATES
          2085 PENTANOATE
                 (PENTANOATE OR PENTANOATES)
             0 BENZIMIDAZOLE-2-ONE-5-N-PENTANOATE
                (BENZIMIDAZOLE (W) 2 (W) ONE (W) 5 (W) N (W) PENTANOATE)
L11
             0 L8 AND BENZIMIDAZOLE-2-ONE-5-N-PENTANOATE
=> s 19 and mif
          2981 MIF
           83 MIFS
          3015 MIF
                (MIF OR MIFS)
             3 L9 AND MIF
L12
=> d ibib abs hitstr tot
```

L12 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2010 ACS on STN ACCESSION NUMBER: 2007:705477 CAPLUS

147:110220 DOCUMENT NUMBER: TITLE: MIF inhibitors

Morand, Eric Francis; Skene, Colin Edward; Tapley, Peter Mark; Li, Xinhua; Jozefiak, Thomas H. Cortical Pty Ltd, Australia PCT Int. Appl., 129 pp. CODEN: PIXXD2 INVENTOR(S):

PATENT ASSIGNEE(S):

DOCUMENT TYPE: English

FAMILY ACC. NUM. COUNT:

| PAT | ENT | NO. | | | | | | | | | LICAT | | | | | | |
|-------|------|------|------|-----|-----|-----|------|------|-----|----|----------------|------|------|-----|-----|------|-----|
| WO | 2007 | 0709 | 61 | | | | | | | | 2006 | | | | | | |
| | W: | ΑE, | AG, | AL, | AM, | AT, | AU, | AZ, | BA, | BB | , BG, | BR, | BW, | BY, | BZ, | CA, | CH, |
| | | CN, | co, | CR, | CU, | CZ, | DE, | DK, | DM, | DZ | , EC, | EE, | EG, | ES, | FI, | GB, | GD, |
| | | GE, | GH, | GM, | GT, | HN, | HR, | HU, | ID, | IL | , IN, | IS, | JP, | KE, | KG, | KM, | KN, |
| | | KP, | KR, | KZ, | LA, | LC, | LK, | LR, | LS, | LT | , LU, | LV, | LY, | MA, | MD, | MG, | MK, |
| | | MN, | MW, | MX, | MY, | MZ, | NA, | NG, | NI, | NO | , NZ, | OM, | PG, | PH, | PL, | PT, | RO, |
| | | RS, | RU, | SC, | SD, | SE, | SG, | SK, | SL, | SM | , SV, | SY, | TJ, | TM, | TN, | TR, | TT, |
| | | TZ, | UA, | UG, | US, | UZ, | VC, | VN, | ZA, | ZM | , ZW | | | | | | |
| | RW: | AT, | BE, | BG, | CH, | CY, | CZ, | DE, | DK, | EE | , ES, | FI, | FR, | GB, | GR, | HU, | IE, |
| | | IS, | IT, | LT, | LU, | LV, | MC, | NL, | PL, | PT | , RO, | SE, | SI, | SK, | TR, | BF, | ВJ, |
| | | | | | | | | | | | , MR, | | | | | | |
| | | GM, | KE, | LS, | MW, | ΜZ, | NA, | SD, | SL, | SZ | , TZ, | UG, | ZM, | ZW, | AM, | ΑZ, | BY, |
| | | | | | RU, | | | | | | | | | | | | |
| | | | | | | | | | | | 2006- | | | | | | |
| | 2634 | | | | | | | | | | 2006- | | | | | | |
| EP | | | | | | | | | | | 2006- | | | | | | |
| | R: | | | | | | | | | | , ES, | | | | | | |
| | | | | | | | | | | | , PT, | | | | | | |
| JP | 2009 | 5214 | 15 | | T | | 2009 | 0604 | | JP | 2008- | 5460 | 33 | | 2 | 0061 | 221 |
| | | | | | | | | | | | 2008- | | | | | | |
| IN | 2008 | KN02 | 589 | | A | | 2009 | 0123 | | IN | 2008- | KN25 | 89 | | 2 | 0080 | 625 |
| KR | 2008 | 0904 | 35 | | A | | 2008 | 1008 | | KR | 2008-
2006- | 7177 | 92 | | 2 | 0080 | 721 |
| CIN | 1014 | 1010 | 7 | | Α. | | 2009 | 0415 | | CN | 2006- | 8005 | 3213 | | 2 | 0080 | 821 |
| | | | | | | | 2009 | 0521 | | | 2008- | | | | | | |
| ORITY | APP | LN. | INFO | . : | | | | | | US | 2005- | 7523 | 54P | | P 2 | 0051 | 221 |
| | | | | | | | | | | WO | 2006- | AU19 | 65 | | W 2 | 0061 | 221 |
| | | | | | | | | | | | | | | | | | |

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
CTHER SOURCE(S):

AB The present invention relates to the use of specific benzimidazolone
analogs and derive. to inhibit the cytokine or biol. activity of
macrophage migration inhibitory factor (MIF), and diseases or
conditions wherein MIF cytokine or biol. activity is implicated.

Novel benzimidazole analogs and derivs. are also provided.

IN 94269-74-7P
RL: PAC (Pharmacological activity); PRP (Properties); SPN (Synthetic
preparation); THU (Therapeutic use); BIOL (Biological study); PREP
(Preparation); USES (Uses)
(MIF inhibitors)
RN 942609-74-7 CAPLUS
CN Acetic acid, 2-[[2-(2,3-dihydro-2-oxo-1H-benzimidazol-5-y1)-2-

ANSWER 1 OF 3 CAPLUS COPYRIGHT 2010 ACS on STN (Continued) (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (MIF inhibitors) 942609-75-8 CAPLUS 2H-Benzimidazol-2-one, 1,3-dihydro-5-[2-[(2-hydroxyethyl)thio]acetyl]-(CA INDEX NAME)

942609-78-1 CAPLUS 2H-Benzimidazol-2-one, 1,3-dihydro-5-[2-[(6-hydroxyhexyl)thio]acetyl]-(CA INDEX NAME)

942609-90-7 CAPLUS

2H-Benzimidazol-2-one, 5-[2-(butvlthio)acetvl]-6-chloro-1.3-dihvdro- (CA INDEX NAME)

$$n-BuS=CH_2-C$$

942609-91-8 CAPLUS
Propanoic acid, 3-[[2-(2,3-dihydro-1,3-dimethyl-2-oxo-1H-benzimidazol-5-yl)-2-oxoethyl]thio]- (CA INDEX NAME)

$$\begin{array}{c|c} & \text{Me} \\ \text{HO}_2\text{C-CH}_2\text{-CH}_2\text{-S-CH}_2\text{-C} \\ & & \text{N} \\ \end{array}$$

942609-92-9 CAPLUS 2H-Benzimidazol-2-one, 5-[2-(butylthio)acetyl]-1,3-dihydro-1,3-dimethyl-(CA INDEX NAME)

L12 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2010 ACS on STN oxoethyl]thio]- (CA INDEX NAME) (Continued)

942609-71-4P 942609-72-5P 942609-73-6P RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses) (MIF inhibitors) 942609-71-4 CAPLUS Propanote acid, 3-[[2-(2,3-dihydro-2-oxo-1H-benzimidazol-5-yl)-2-oxoethyl]thio]-, methyl ester (CA INDEX NAME)

$$\begin{picture}(20,0) \put(0,0){\line(1,0){100}} \put(0,0){\line(1,0){100$$

942609-72-5 CAPLUS
Propanoic acid, 3-[[2-(2,3-dihydro-2-oxo-1H-benzimidazol-5-yl)-2-oxoethyl]thio]- (CA INDEX NAME)

942609-73-6 CAPLUS

Acetic acid, 2-[(2-(2,3-dihydro-2-oxo-1H-benzimidazol-5-yl)-2-oxoethyl]thio]-, methyl ester (CA INDEX NAME)

$$\underset{\mathsf{MeO}-\mathsf{C}-\mathsf{CH}_2-\mathsf{S}-\mathsf{CH}_2-\mathsf{C}}{\overset{\circ}{\bigcirc}} \xrightarrow{\overset{\circ}{\mathsf{H}}} \overset{\mathsf{H}}{\underset{\mathsf{N}}{\bigcirc}} \mathsf{C}$$

942609-75-8P 942609-78-1P 942609-90-7P 942609-93-0P 942609-91-8P 942609-94-1P 942609-92-9P 942609-95-2P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU

L12 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2010 ACS on STN (Continued)

RN 942609-93-0 CAPLUS CN Propanoic acid, 3-[[2-(6-chloro-2,3-dihydro-2-oxo-1H-benzimidazol-5-y1)-2-oxoethyl]thio]- (CA INDEX NAME)

942609-94-1 CAPLUS

94209-94-1 CAPLOS 2H-Benzimidazol-2-one, 5-[2-(butylthio)acetyl]-6-chloro-1,3-dihydro-1,3-dimethyl- (CA INDEX NAME) dimethvl-

942609-95-2 CAPLUS
Propanoic acid, 3-[[2-(6-chloro-2,3-dihydro-1,3-dimethyl-2-oxo-lH-benzimidazol-5-yl)-2-oxoethyl]thio]- (CA INDEX NAME)

93202-41-6P 93202-51-8P 897545-61-8P 897545-85-6F RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (MMF inhibitors) 93202-41-6 CAPLUS

L12 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2010 ACS on STN (Continued)
CN 2H-Benzimidazol-2-one, 5-(2-chloroacetyl)-1,3-dihydro- (CA INDE (CA INDEX NAME)

93202-51-8 CAPLUS 2H-Benzimidazol-2-one, 5-chloro-6-(2-chloroacetyl)-1,3-dihydro- (CA INDEX NAME)

897545-61-8 CAPLUS 2H-Benzimidazol-2-one, 5-(2-chloroacetyl)-1,3-dihydro-1,3-dimethyl- (CA INDEX NAME)

897545-85-6 CAPLUS UB-Benzimidazol-2-one, 5-chloro-6-(2-chloroacetyl)-1,3-dihydro-1,3-dimethyl- (CA INDEX NAME)

REFERENCE COUNT:

THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE

FORMAT

L12 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2010 ACS on STN (Continued)

634602-82-7 CAPLUS 1H-Benzimidazole-5-carboxylic acid, 2,3-dihydro-2-oxo-, pentyl ester (CA INDEX NAME)

OS.CITING REF COUNT: THERE ARE 1 CAPLUS RECORDS THAT CITE THIS 1

(1 CITINGS)
THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE REFERENCE COUNT:

FORMAT

L12 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2010 ACS on STN ACCESSION NUMBER: 2005:567119 CAPLUS DOCUMENT NUMBER: 143:83496

143:83496
Implantable device containing inhibitor of macrophage migration inhibitory factor
Morand, Eric Francis; Iskander, Magdy Naguib; Skene,
Colin Edward, Tapley, Feter Mark
Cortical Pty Ltd., Australia
PCT Int. Appl., 56 pp.
CODEN: PIXXD2 TITLE:

INVENTOR(S):

PATENT ASSIGNEE(S):

SOURCE:

DOCUMENT TYPE: LANGUAGE: FAMILY ACC. NUM. COUNT: PATENT INFORMATION: English

| PAT | PATENT NO. | | | | | D | DATE | | APPLICATION NO. | | | | | | DATE | | | |
|----------|------------|------|------|-----|-----|-----|------|------|-----------------|------|------|------|-----|-----|----------|------|-----|--|
| | | | | | | - | | | | | | | | | - | | | |
| WO : | 2005 | 0583 | 04 | | A1 | | 2005 | 0630 | | WO 2 | 004- | AU17 | 78 | | 20041217 | | | |
| | W: | ΑE, | AG, | AL, | AM, | AT, | AU, | AZ, | BA, | BB, | BG, | BR, | BW, | BY, | BZ, | CA, | CH, | |
| | | CN, | co, | CR, | CU, | CZ, | DE, | DK, | DM, | DZ, | EC, | EE, | EG, | ES, | FΙ, | GB, | GD, | |
| | | GE, | GH, | GM, | HR, | HU, | ID, | IL, | IN, | IS, | JP, | KE, | KG, | KP, | KR, | KZ, | LC, | |
| | | LK, | LR, | LS, | LT, | LU, | LV, | MA, | MD, | MG, | MK, | MN, | MW, | MX, | MZ, | NA, | NI, | |
| | | NO, | NZ, | OM, | PG, | PH, | PL, | PT, | RO, | RU, | SC, | SD, | SE, | SG, | SK, | SL, | SY, | |
| | | ΤJ, | TM, | TN, | TR, | TT, | TZ, | UA, | UG, | US, | UZ, | VC, | VN, | YU, | ZA, | ZM, | ZW | |
| | RW: | BW, | GH, | GM, | KE, | LS, | MW, | MZ, | NA, | SD, | SL, | SZ, | TZ, | UG, | ZM, | ZW, | AM, | |
| | | AZ, | BY, | KG, | KZ, | MD, | RU, | TJ, | TM, | AT, | BE, | BG, | CH, | CY, | CZ, | DE, | DK, | |
| | | EE, | ES, | FI, | FR, | GB, | GR, | ΗU, | IE, | IS, | IT, | LT, | LU, | MC, | NL, | PL, | PT, | |
| | | RO, | SE, | SI, | SK, | TR, | BF, | ВJ, | CF, | CG, | CI, | CM, | GΑ, | GN, | GQ, | GW, | ML, | |
| | | MR, | NE, | SN, | TD, | TG | | | | | | | | | | | | |
| PRIORITY | APP | LN. | INFO | . : | | | | | | AU 2 | 003- | 9069 | 83 | | A 21 | 0031 | 217 | |

OTHER SOURCE(S):

R SOURCE(S): MARPAT 143:83496

The present invention provides an implantable device, particularly a stent, comprising: (i) a reservoir containing at least one MIF inhibitor; and (ii) means to release or elute the inhibitor from the reservoir. Also disclosed are methods of treatment of diseases associated

ciated
with MIF cytokine activity using the implantable device.
Treatment with pentyl 2-oxo-2,3-dihydro-1H-1,3-benzimidazole
-5-carboxylate significantly inhibited vascular smooth muscle cell
survival and proliferation.
23814-14-4 36896-32-9 634602-82-7
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL
(Biological study); USES (Uses)
(implantable device containing inhibitor of macrophage migration
bitory

inhibitory

RN 23814-14-4 CAPLUS
CN 1H-Benzimidazole-5-carboxylic acid, 2,3-dihydro-2-oxo- (CA INDEX NAME)

36896-32-9 CAPLUS lH-Benzimidazole-5-butanoic acid, 2,3-dihydro- γ ,2-dioxo- (CA INDEX

L12 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2003:991486 CAPLUS
DOCUMENT NUMBER: 140:27827
TITLE: Preparation of benzimidazole derivatives which inhibit the cytokine or biological activity of macrophage migration inhibitory factor (MIF)
INVENTOR(S): Morand, Eric Francis; Iskander, Magdy Naguib
PATENT ASSIGNEE(S): Cortical Pty. Ltd., Australia
SOURCE: PCT Int. Appl., 149 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: PRANLLY ACC. NUM. COUNT: 2

DOCUMENT TYPE: LANGUAGE: FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

| PA: | | | | | | | | | APPLICATION NO. | | | | | | | | |
|----------|-------|------|------|-----|-----|-----|------|------|-----------------|----|----------------|-------|-----|-----|-----|------|-----|
| WO | | | | | | | | | | | 2003 | | | | | | |
| | W: | AE, | AG, | AL, | AM, | AT, | AU, | AZ, | BA, | BB | , BG, | BR, | BY, | BZ, | CA, | CH, | CN, |
| | | co, | CR, | CU, | CZ, | DE, | DK, | DM, | DZ, | EC | , EE, | ES, | FI, | GB, | GD, | GE, | GH, |
| | | GM, | HR, | HU, | ID, | IL, | IN, | IS, | JP, | KE | , KG, | KP, | KR, | KZ, | LC, | LK, | LR, |
| | | LS, | LT, | LU, | LV, | MA, | MD, | MG, | MK, | MN | , MW, | MX, | MZ, | NI, | NO, | NZ, | OM, |
| | | PH, | PL, | PT, | RO, | RU, | SC, | SD, | SE, | SG | , SK, | SL, | TJ, | TM, | TN, | TR, | TT, |
| | | | | | | | | | | | , ZM, | | | | | | |
| | RW: | | | | | | | | | | , TZ, | | | | | | |
| | | | | | | | | | | | , СН, | | | | | | |
| | | FI, | FR, | GB, | GR, | ΗU, | IE, | IT, | LU, | MC | , NL, | PT, | RO, | SE, | SI, | SK, | TR, |
| | | | | | | | | | | | , GW, | | | | | | |
| | 2487 | | | | | | | | | | 2003- | | | | | | |
| | | | | | | | | | | | 2003- | | | | | | |
| | 2405 | | | | A | | 2005 | 0223 | | GB | 2004- | 2724 | 2 | | 2 | 0030 | 606 |
| | 2405 | | | | | | | | | | | | | | | | |
| EP | | | | | | | | | | | 2003- | | | | | | |
| | R: | | | | | | | | | | , IT, | | | | | | |
| | | | | | | | | | | | , TR, | | | | | | |
| CN | 1675 | 185 | | | A | | 2005 | 0928 | | CN | 2003- | 8189 | 35 | | 2 | 0030 | 606 |
| JP | 2005 | 5330 | 49 | | Т | | 2005 | 1104 | | JP | 2004-
2003- | 5112 | 73 | | 2 | 0030 | 606 |
| NZ | 53731 | 01 | | | A | | 2006 | 0630 | | NZ | 2003- | 5373 | 01 | | 2 | 0030 | 606 |
| IN | 2004 | KN01 | 348 | | A | | 2006 | 0804 | | | 2004- | | | | | | |
| | 2004 | | | | | | | | | | 2004- | | | | | | |
| | 2006 | | | | A1 | | 2006 | 0713 | | | 2005- | | | | | | |
| PRIORITY | APP: | LN. | INFO | . : | | | | | | AU | 2002- | 2832 | | | A 2 | 0020 | 607 |
| | | | | | | | | | | AU | 2002- | 2834 | | | A 2 | 0020 | 607 |
| | | | | | | | | | | WO | 2003 | AU 71 | 7 | | W 2 | 0030 | 606 |

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT OTHER SOURCE(S): MARPAT 140:27827

Title compds. I [X = 0, S, alkyl, amino; Y = amino, O, S, alkyl; Z = CO, CS, imino, SO, SO2; R1 = H, alkyl, alkyloxy, etc.; R2 = alkyl, alkenyl, alkynyl, etc.; R3 = H, alkyl, alkylamino, alkylalkoxy, etc.; R4 = H, AB

alkyni, etc.; R3 = H, alkyl, alkylamino, alkylalkozy, etc.; R4 = H,
, alkyl, alkenyl, alkynyl, etc.] are prepared For instance,
3,4-diaminotoluene is reacted with urea (pentanol, reflux) to give
5-methylbenzimidazol-2-one (56%). Example compds. are inhibitors of the
cytokine or biol. activity of macrophage migration inhibitory factor (
MIF). I are useful for the treatment of Lyme disease, connective
tissue diseases, etc.
5400-75-9P 23814-14-4P 67014-36-2P
83573-62-0P 634602-85-0P 634602-87-2P
RL: PAC (Pharmacological activity), RCT (Reactant); SPN (Synthetic
preparation); THU (Therapeutic use); BIOL (Biological study); PREP
(Preparation); TROT (Reactant or reagent); USES (Uses)
(preparation of substituted benzimidazoles which inhibit the
cytokine or biol. activity of macrophage migration inhibitory factor (
MIF))
5400-75-9 CAPLUS
2H-Benzimidazol-2-one, 1,3-dihydro-5-methyl- (CA INDEX NAME)

23814-14-4 CAPLUS
1H-Benzimidazole-5-carboxylic acid, 2,3-dihydro-2-oxo- (CA INDEX NAME)

HO2C

67014-36-2 CAPLUS 2H-Benzimidazol-2-one, 5-amino-1,3-dihydro-6-methyl- (CA INDEX NAME)

L12 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2010 ACS on STN (Continued)
(Uses)
(prepn. of substituted benzimidazoles which inhibit the
cytokine or biol. activity of macrophage migration inhibitory factor (
MTF))
RN 36896-35-2 CAPLUS
CN 1H-Benzimidazole-5-pentanoic acid, 2,3-dihydro-8,2-dioxo- (CA INDEX NAME)

100253-32-5 CAPLUS 2H-Benzimidazol-2-one, 1,3-dihydro-5-pentyl- (CA INDEX NAME)

Me- (CH2)4

106429-57-6 CAPLUS
1H-Benzimidazole-5-carboxylic acid, 2,3-dihydro-2-oxo-, methyl ester (CA INDEX NAME)

634602-82-7 CAPLUS
1H-Benzimidazole-5-carboxylic acid, 2,3-dihydro-2-oxo-, pentyl ester (CA INDEX NAME)

(CH₂)₄-0

634602-83-8 CAPLUS 1H-Benzimidazole-5-carboxylic acid, 2,3-dihydro-2-oxo-, 2-(2-hydroxyethoxy)ethyl ester (CA INDEX NAME)

L12 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2010 ACS on STN (Continued)

83573-62-0 CAPLUS 2H-Benzimidazol-2-one, 1,3-dihydro-5-methyl-6-nitro- (CA INDEX NAME)

OoN

634602-85-0 CAPLUS L-Serine, N-[(2,3-dihydro-2-oxo-1H-benzimidazol-5-yl)carbonyl]-, methyl ester (CA INDEX NAME)

но

634602-87-2 CAPLUS L-Phenylalanine, N-[(2,3-dihydro-2-oxo-1H-benzimidazol-5-yl)carbonyl]-, methyl ester (CA INDEX NAME)

Absolute stereochemistry.

36896-35-2P 634602-82-7P 634602-86-1P 100253-32-5P 106429-57-6P 634602-83-8P 634602-88-3P 634602-92-9P 634602-84-9P 634602-89-4P 634602-91-8P 634602-93-0F 634602-95-2P 634603-00-2P 634602-96-3F 634602-97-4P rmacological activity); SPN (Synthetic preparation); THU use); BIOL (Biological study); PREP (Preparation); USES

L12 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2010 ACS on STN

634602-84-9 CAPLUS 1H-Benzimidazole-5-carboxylic acid, 2,3-dihydro-2-oxo-, ethyl ester (CA INDEX NAME)

(Continued)

634602-86-1 CAPLUS L-Serine, N-[(2,3-dihydro-2-oxo-1H-benzimidazol-5-y1)carbonyl]- (CA INDEX NAME)

Absolute stereochemistry.

634602-88-3 CAPLUS CAPHONY LABOR N-[(2,3-dihydro-2-oxo-1H-benzimidazol-5-yl)carbonyl](CA INDEX NAME)

Absolute stereochemistry.

634602-89-4 CAPLUS 1H-Benzimidazole-5-carboxamide, N-[2-(3,4-dihydroxyphenyl)ethyl]-2,3-dihydro-2-oxo- (CA INDEX NAME)

L12 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2010 ACS on STN (Continued)

634602-91-8 CAPLUS $\beta\text{-D-Glucopyranose, 2,3,4,6-tetraacetate } \\ 1-(2,3-\text{dihydro-2-oxo-1H-benzimidazole-5-carboxylate})$ (CA INDEX NAME)

Absolute stereochemistry.

634602-92-9 CAPLUS 2H-Benzimidazol-2-one, 5-bromo-1,3-dihydro-6-methyl- (CA INDEX NAME)

634602-93-0 CAPLUS 2H-Benzimidazol-2-one, 1,3-dihydro-5-hydroxy-6-methyl- (CA INDEX NAME)

634602-94-1 CAPLUS 2H-Benzimidazol-2-one, 1,3-dihydro-5-tridecyl- (CA INDEX NAME)

L12 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2010 ACS on STN (Continued)

OS.CITING REF COUNT: RECORD THERE ARE 1 CAPLUS RECORDS THAT CITE THIS

(1 CITINGS)
THERE ARE 17 CITED REFERENCES AVAILABLE FOR

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2010 ACS on STN (Continued)

634602-95-2 CAPLUS 2H-Benzimidazol-2-one, 4,5,7-tribromo-1,3-dihydro-6-methyl- (CA INDEX NAME)

634602-96-3 CAPLUS Acetamide, N-(2,3-dihydro-6-methyl-2-oxo-1H-benzimidazol-5-yl)-2-(2-pyrimidinylthio)- (CA INDEX NAME)

$$\begin{array}{c|c} & & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & \\ & & & \\$$

634602-97-4 CAPLUS 1H-Benzimidazole-5-carbothioic acid, 2,3-dihydro-2-oxo-, S-pentyl ester (CA INDEX NAME)

634603-00-2 CAPLUS 1H-Benzimidazole-5-carboximidamide, N-butyl-2,3-dihydro-2-oxo- (CA INDEX NAME)

=> d ibib abs hitstr tot

L13 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2010 ACS on STN ACCESSION NUMBER: 2007:705477 CAPLUS

147:110220

DOCUMENT NUMBER: TITLE: MIF inhibitors

Morand, Eric Francis; Skene, Colin Edward; Tapley, Peter Mark; Li, Xinhua; Jozefiak, Thomas H. Cortical Pty Ltd, Australia PCT Int. Appl., 129 pp. CODEN: PIXXD2 INVENTOR(S):

PATENT ASSIGNEE(S):

DOCUMENT TYPE: English

FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

| | | | | | | | | | | | | LICAT | | | | | | |
|---------|-----|------|------|------|-----|-----|-----|------|------|-----|----|--------|------|-----|-----|-----|------|-----|
| | | | | | | | | | | | | 2006- | | | | | | |
| | | W: | ΑE, | AG, | AL, | AM, | AT, | AU, | AZ, | BA, | BB | BG, | BR, | BW, | BY, | BZ, | CA, | CH, |
| | | | CN, | co, | CR, | CU, | CZ, | DE, | DK, | DM, | DZ | , EC, | EE, | EG, | ES, | FI, | GB, | GD, |
| | | | GE, | GH, | GM, | GT, | HN, | HR, | HU, | ID, | IL | , IN, | IS, | JP, | KE, | KG, | KM, | KN, |
| | | | KP, | KR, | KZ, | LA, | LC, | LK, | LR, | LS, | LI | LU, | LV, | LY, | MA, | MD, | MG, | MK, |
| | | | MN, | MW, | MX, | MY, | MΖ, | NA, | NG, | NI, | NC | NZ, | OM, | PG, | PH, | PL, | PT, | RO, |
| | | | RS, | RU, | SC, | SD, | SE, | SG, | SK, | SL, | SM | i, SV, | SY, | ΤJ, | TM, | TN, | TR, | TT, |
| | | | TZ, | UA, | UG, | US, | UΖ, | VC, | VN, | ZA, | ZM | i, ZW | | | | | | |
| | | RW: | | | | | | | | | | ES, | | | | | | |
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| El | | | | | | | | | | | | 2006- | | | | | | |
| | | R: | | | | | | | | | | ES, | | | | | | |
| | | | | | | | | | | | | , PT, | | | | | | |
| | | | | | | | | | | | | 2008- | | | | | | |
| | | | | | | | | | | | | 2008- | | | | | | |
| II | 1 5 | 0081 | Ø102 | 589 | | A | | 2009 | 0123 | | IM | 2008- | KN25 | 89 | | 2 | 0080 | 625 |
| | | | | | | | | | | | | 2008- | | | | | | |
| | | | | | | | | | | | | 2006- | | | | | 0080 | |
| | | | | | | | | 2009 | 0521 | | | 2008- | | | | | 0081 | |
| PRIORI: | ΓY | APPI | .N. | INFO | . : | | | | | | US | 2005- | 7523 | 54P | | P 2 | 0051 | 221 |
| | | | | | | | | | | | WO | 2006- | AU19 | 65 | | W 2 | 0061 | 221 |
| | | | | | | | | | | | WO | 2006- | US19 | 65 | | W 2 | 0061 | 221 |

wo 20Uc-US1965 W 20Uc1221

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

OTHER SOURCE(S): MARPAT 147:110220

AB The present invention relates to the use of specific benzimidazolone
analogs and derivs. to inhibit the cytokine or biol. activity of
macrophage migration inhibitory factor (MIF), and diseases or conditions
wherein MIF cytokine or biol. activity is implicated. Novel
benzimidazole analogs and derivs. are also provided.

IT 94269-74-7P

RL: PAC (Pharmacological activity); PRP (Properties); SPN (Synthetic
preparation); THU (Therapeutic use); BIOL (Biological study); PREP

(Preparation); USES (USes)

(MIF inhibitors)

RN 942609-74-7 CAPUS

CN Acetic acid, 2-[[2-(2,3-dihydro-2-oxo-1H-benzimidazol-5-y1)-2-

ANSWER 1 OF 4 CAPLUS COPYRIGHT 2010 ACS on STN (Continued) (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (MIF inhibitors) 942609-75-8 CAPLUS 2H-Benzimidazol-2-one, 1,3-dihydro-5-[2-[(2-hydroxyethyl)thio]acetyl]-(CA INDEX NAME)

942609-78-1 CAPLUS 2H-Benzimidazol-2-one, 1,3-dihydro-5-[2-[(6-hydroxyhexyl)thio]acetyl]-(CA INDEX NAME)

HO- (CH2)6-S-CH2-

942609-90-7 CAPLUS

2H-Benzimidazol-2-one, 5-[2-(butvlthio)acetvl]-6-chloro-1.3-dihvdro- (CA

INDEX NAME)

942609-91-8 CAPLUS
Propanoic acid, 3-[[2-(2,3-dihydro-1,3-dimethyl-2-oxo-1H-benzimidazol-5-yl)-2-oxoethyl]thio]- (CA INDEX NAME)

942609-92-9 CAPLUS 2H-Benzimidazol-2-one, 5-[2-(butylthio)acetyl]-1,3-dihydro-1,3-dimethyl-(CA INDEX NAME)

L13 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2010 ACS on STN oxoethyl]thio]- (CA INDEX NAME)

(Continued)

942609-71-4P 942609-72-5P 942609-73-6P RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses) (MIF inhibitors) 942609-71-4 CAPLUS Propanote acid, 3-[[2-(2,3-dihydro-2-oxo-1H-benzimidazol-5-yl)-2-oxoethyl]thio]-, methyl ester (CA INDEX NAME)

942609-72-5 CAPLUS
Propanoic acid, 3-[[2-(2,3-dihydro-2-oxo-1H-benzimidazol-5-yl)-2-oxoethyl]thio]- (CA INDEX NAME)

942609-73-6 CAPLUS

Acetic acid, 2-[(2-(2,3-dihydro-2-oxo-1H-benzimidazol-5-yl)-2-oxoethyl]thio]-, methyl ester (CA INDEX NAME)

$$\underset{\mathsf{MeO}-\mathsf{C}-\mathsf{CH}_2-\mathsf{S}-\mathsf{CH}_2-\mathsf{C}}{\overset{\circ}{\bigcap}} \underset{\mathsf{N}}{\overset{\mathsf{H}}{\bigcap}} \mathsf{N}$$

942609-75-8P 942609-78-1P 942609-90-7P 942609-93-0P

942609-91-8P 942609-94-1P 942609-92-9P 942609-95-2P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU

L13 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2010 ACS on STN (Continued)

RN 942609-93-0 CAPLUS CN Propanoic acid, 3-[[2-(6-chloro-2,3-dihydro-2-oxo-1H-benzimidazol-5-y1)-2-oxoethyl]thio]- (CA INDEX NAME)

942609-94-1 CAPLUS

94209-94-1 CAPLOS 2H-Benzimidazol-2-one, 5-[2-(butylthio)acetyl]-6-chloro-1,3-dihydro-1,3-dimethyl- (CA INDEX NAME) dimethvl-

$$\begin{array}{c|c} & \text{Me} \\ \text{n-BuS-CH}_2-\text{C} \\ & \text{N} \end{array}$$

942609-95-2 CAPLUS
Propanoic acid, 3-[[2-(6-chloro-2,3-dihydro-1,3-dimethyl-2-oxo-lH-benzimidazol-5-yl)-2-oxoethyl]thio]- (CA INDEX NAME)

93202-41-6P 93202-51-8P 897545-61-8P 897545-85-6F RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (MIF inhibitors) 93202-41-6 CAPLUS

L13 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2010 ACS on STN (Continued)
CN 2H-Benzimidazol-2-one, 5-(2-chloroacetyl)-1,3-dihydro- (CA INDE (CA INDEX NAME)

93202-51-8 CAPLUS 2H-Benzimidazol-2-one, 5-chloro-6-(2-chloroacetyl)-1,3-dihydro- (CA INDEX NAME)

897545-61-8 CAPLUS 2H-Benzimidazol-2-one, 5-(2-chloroacetyl)-1,3-dihydro-1,3-dimethyl- (CA INDEX NAME)

897545-85-6 CAPLUS JB-Benzimidazol-2-one, 5-chloro-6-(2-chloroacetyl)-1,3-dihydro-1,3-dimethyl- (CA INDEX NAME)

REFERENCE COUNT:

THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE

FORMAT

L13 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2010 ACS on STN (Continued)

Title compds. I [A1 and A2 independently = bond or CR13R14, where one of A1 and A2 is optionally absent; B = (un)substituted bicycloheterocycle; J = <math>C(R6a) - CR13R14, and CO; K = C(R6b), CR13R14, CO, etc.; R4 = H, (un)substituted alkyl, benzyl, etc.; R5a, R5b, and R5c = H, alkyl,

(un)substituted anj, which, allowed alkyl, etc.; R6a and R6b independently = H, OH, halo, (un)substituted alkyl, etc.; R13 and R14 = H or (un)substituted alkyl; m = 1 or 2; n = 1 or 2], and their pharmaceutically acceptable salts, useful as antagonists of calcitonin gene-related peptide (CGRP) receptors and useful in the treatment or prevention of diseases in which the CGRP is involved, such

treatment or prevention of diseases in which the Chr is involved, which as headache, migraine and cluster headache. Thus, e.g., II was prepared by reaction of 5-amino-1,3-dihydro-2'H,5'H-spiro[indene-2,3'-pyrrolidine]-2',5'-dione (preparation given) with 5-amino-1,3-dihydrospiro[indene-2,3'-pyrrolo[2,3-b]pyridin]-2'(1'H)-one (preparation given). I demonstrated activity as antagonists of the GGRP receptor with Ki or IC50 values generally less than about 50 µM. The invention is also directed to pharmaceutical compns. comprising these compds. and the use of these compds. and compns. in the prevention or treatment of such diseases in which GCRP is involved.

IT 880077-47-4P 880078-91-02-P 880078-03-5-P RL: PAC (Pharmacological activity); SFN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(Therapeutic use); BIOL (Bloiogical Scudy), Fine (Uses) (Uses) (preparation of bicyclic anilide spirolactam cgrp receptor antagonists)
RN 880077-47-4 CAPLUS
CN 1H-Benzimidazole-1-acetic acid, 3-[2-[(1,3-dihydro-2'-oxospiro[2H-indene-2,3'-pyrrolidin]-5-yl)amino]-2-oxoethyl]-2,3-dihydro-5,7-dimethyl-2-oxo-, methyl ester (CA INDEX NAME)

L13 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2010 ACS on STN ACCESSION NUMBER: 2006;269508 CAPLUS DOCUMENT NUMBER: 144:331420

TITLE:

INVENTOR(S):

144:331420
Preparation of bicyclic anilide spirolactam cgrp receptor antagonists
Bell, Ian M.; Theberge, Cory R.; Stump, Craig A.; Zhang, Xufang; Gallicchio, Steven N.; Zartman, C. Blair

PATENT ASSIGNEE(S):

Merck & Co., Inc., USA PCT Int. Appl., 116 pp. CODEN: PIXXD2 Patent

DOCUMENT TYPE: English

LANGUAGE: FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

| | | | | | | | | | | | | ICAT | | | | | | |
|----------------------|------------------|---|---|---|--|--|---|--|--|---|--|---|--|--|--|--|--|--|
| W | 0 | 2006 | 0316 | 10 | | | | 2006 | 0323 | | | 005- | | | | | | |
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DN01 | BE,
IT,
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493
878 | BG,
LI, | A1
A2
CH,
LT,
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A | CY, | 2006
2006
2007
CZ,
LV,
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2008 | 0323
0323
0620
DE,
MC,
0815
0424
0803 | DK,
NL, | CA 2
EP 2
EE,
PL,
CN 2
JP 2
JP 2
JN 2 | 2005-
2005-
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ES,
PT,
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2007-
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2007- | 2579
7954
FI,
RO,
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WO 2005-US32041 W 20050909

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT OTHER SOURCE(S): MARPAT 144:331420

PR

L13 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2010 ACS on STN (Continued)

880077-51-0 CAPLUS 1H-Benzimidazole-1,3(2H)-diacetamide,

N1-(1,3-dihydro-2'-oxospiro[2H-indene-2,3'-pyrrolidin]-5-y1)-4,6-dimethyl-2-oxo- (CA INDEX NAME)

880077-93-0 CAPLUS

RN 8800//-93-U CAPLOS

(N 1H-Benzimidazole-1-acetic acid,
2,3-dihydro-5,7-dimethyl-2-oxo-3-[2-oxo-2[(1,1',2',3-terhaydro-2'-oxospiro[2H-indene-2,3'-[3H]pyrrolo[2,3-b]pyridin]-5-yl)amino]ethyl]-, methyl ester (9CI) (CA INDEX NAME)

RN 880077-97-4 CAPLUS
CN 1H-Benzimidazole-1-acetic acid,
2,3-dihydro-5,7-dimethyl-2-oxo-3-[2-oxo-2[(1,1,'2,',3-terahydro-2'-oxospiro[2H-indene-2,3'-[3H]pyrrolo[2,3-b]pyridin]-5-yl)amino]ethyl]-, ethyl ester (9CI) (CA INDEX NAME)

880078-00-2 CAPLUS 1H-Benzimidazole-1,3(2H)-diacetamide,

N3,N3,4,6-tetramethyl-2-oxo-N1-(1,1',2',3-tetrahydro-2'-oxospiro[2H-indene-2,3'-[3H]pyrrolo[2,3-b]pyridin]-5-yl)- (9CI) (CA INDEX NAME)

L13 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2010 ACS on STN (Continued)
CN 1H-Benzimidazole-1-acetic acid, 2,3-dihydro-4,6-dimethyl-2-oxo-,
1,1-dimethylethyl ester (CA INDEX NAME)

767304-81-4 CAPLUS
1H-Benzimidazole-1,3(2H)-diacetic acid, 4,6-dimethyl-2-oxo-,
3-(1,1-dimethylethyl) 1-methyl ester (CA INDEX NAME)

767304-82-5 CAPLUS 1H-Benzimidazole-1,3(2H)-diacetic acid, 4,6-dimethyl-2-oxo-, 3-methyl ester (CA INDEX NAME)

880079-11-8 CAPLUS
1H-Benzimidazole-1-acetic acid, 3-[2-(dimethylamino)-2-oxoethyl]-2,3-dihydro-5,7-dimethyl-2-oxo- (CA INDEX NAME)

880079-13-0 CAPLUS

880078-03-5 CAPLUS 1H-Benzimidazole-1,3(2H)-diacetamide,

N1,N1,4,6-tetramethyl-2-oxo-N3-(1,1',2',3-tetrahydro-2'-oxospiro[2H-indene-2,3'-[3H]pyrrolo[2,3-b]pyridin]-5-yl)- (9CI) (CA INDEX NAME)

102308-68-9P 767304-80-3P 767304-81-4P 767304-82-5P 880079-11-8P 880079-13-0P RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (preparation of bicyclic anilide spirolactam cgrp receptor

(preparation of bicyclic anilide spirolateam egip receptor aniagonists)
RN 102308-68-9 CAPLUS
CN 2H-Benzimidazol-2-one, 1,3-dihydro-4,6-dimethyl- (CA INDEX NAME)

RN 767304-80-3 CAPLUS

ANSWER 2 OF 4 CAPLUS COPYRIGHT 2010 ACS on STN (Continued) 1H-Benzimidazole-1-acetic acid, 3-[2-(dimethylamino)-2-oxoethyl]-2,3-dihydro-5,7-dimethyl-2-oxo-, methyl ester (CA INDEX NAME)

OS.CITING REF COUNT: RECORD THERE ARE 6 CAPLUS RECORDS THAT CITE THIS (7 CITINGS)

TITLE:

140:27827
Preparation of benzimidazole derivatives
which inhibit the cytokine or biological activity of
macrophage migration inhibitory factor (MIF)
Morand, Eric Francis; Iskander, Magdy Naguib
Cortical Pty. Ltd., Australia
PCT Int. Appl., 149 pp.
CODEN: PIXXD2

INVENTOR(S): PATENT ASSIGNEE(S):

SOURCE:

DOCUMENT TYPE: LANGUAGE: FAMILY ACC. NUM. COUNT: PATENT INFORMATION: English

| | CENT I | | | | | | | | | | LICAT | | | | | | |
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| | | FI, | FR, | GB, | GR, | HU, | IE, | IT, | LU, | MC | , NL, | PT, | RO, | SE, | SI, | SK, | TR, |
| | | BF, | ВJ, | CF, | CG, | CI, | CM, | GΑ, | GN, | GÇ | , GW, | ML, | MR, | NE, | SN, | TD, | TG |
| CA | 2487 | 838 | | | A1 | | 2003 | 1218 | | CA | 2003- | 2487 | 838 | | 2 | 0030 | 606 |
| | | | | | | | | | | | 2003- | | | | | | |
| | | | | | | | | | | GB | 2004- | 2724 | 2 | | 2 | 0030 | 606 |
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| | 1675 | | | | | | | | | | 2003- | | | | | | |
| | | 5330 | 49 | | Т | | 2005 | 1104 | | JP | 2004- | 5112 | 73 | | 2 | 0030 | 606 |
| | 53731 | | | | | | | | | | 2003- | | | | | | |
| | | | | | | | | | | | 2004- | | | | | 0041 | |
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APP | | | | AI | | 2006 | 0.113 | | | 2003- | | | | | | |
| OVIII | APP. | DIA. | TIMEO | | | | | | | Δυ | 2002- | 2032 | | | n 2 | 0020 | 007 |
| | | | | | | | | | | AU | 2002- | 2834 | | | A 2 | 0020 | 607 |
| | | | | | | | | | | WO | 2003- | AU71 | 7 | | W 2 | 0030 | 606 |

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT OTHER SOURCE(S): MARPAT 140:27827

L13 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2010 ACS on STN (Continued)

83573-62-0 CAPLUS 2H-Benzimidazol-2-one, 1,3-dihydro-5-methyl-6-nitro- (CA INDEX NAME)

634602-85-0 CAPLUS L-Serine, N=[(2,3-dihydro-2-oxo-1H-benzimidazol-5-yl)carbonyl]-, methyl ester (CA INDEX NAME)

Absolute stereochemistry.

634602-87-2 CAPLUS L-Phenylalanine, N-[(2,3-dihydro-2-oxo-1H-benzimidazol-5-yl)carbonyl]-, methyl ester (CA INDEX NAME)

Absolute stereochemistry.

36896-35-2P 100253-32-5P 106429-57-6P 634602-82-7P 634602-83-8P 634602-84-9P 634602-86-1P 634602-88-3P 634602-89-4P 634602-91-8P 634602-92-9P 634602-93-0P 634602-94-1P 634602-95-2P 634602-96-3P 634602-97-4P 634603-00-2P RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES

L13 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2010 ACS on STN (Continued)

Title compds. I [X = 0, S, alkyl, amino; Y = amino, O, S, alkyl; Z = CO, CS, imino, SO, SO2; R1 = H, alkyl, alkyloxy, etc.; R2 = alkyl, alkenyl, alkynyl, etc.; R3 = H, alkyl, alkylamino, alkylalkoxy, etc.; R4 = H, AB

alkyn1, etc.; R3 = H, alkyl, alkylamnno, alkylalkoxy, etc.; R4 = H,
alkyl, alkenyl, alkynyl, etc.] are prepared For instance,
3,4-diaminotoluene is reacted with urea (pentanol, reflux) to give
5-methylbenzimidazol-2-one (56%). Example compds. are inhibitors of the
cytokine or biol. activity of macrophage migration inhibitory factor
(MIF). I are useful for the treatment of Lyme disease, connective tissue
diseases, etc.
5400-75-9P 23814-14-4P 67014-36-2P
83573-62-0P 634602-85-0P 634602-87-2P
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic
preparation); THU (Therapeutic use); BIOL (Biological study); PREP
(Preparation); TROT (Reactant or reagent); USES (Uses)
(preparation of substituted benzimidazoles which inhibit the
cytokine or biol. activity of macrophage migration inhibitory factor
(MIF))
5400-75-9 CAPLUS
2H-Benzimidazol-2-one, 1,3-dihydro-5-methyl- (CA INDEX NAME)

23814-14-4

23814-14-4 CAPLUS
1H-Benzimidazole-5-carboxylic acid, 2,3-dihydro-2-oxo- (CA INDEX NAME)

67014-36-2 CAPLUS

2H-Benzimidazol-2-one, 5-amino-1,3-dihydro-6-methyl- (CA INDEX NAME)

L13 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2010 ACS on STN (Continued)
(Uses)
(prepn. of substituted benzimidazoles which inhibit the
cytokine or biol. activity of macrophage migration inhibitory factor
(NIF))
RN 36896-35-2 CAPLUS
CN 1H-Benzimidazole-5-pentanoic acid, 2,3-dihydro-8,2-dioxo- (CA INDEX NAMP)

100253-32-5 CAPLUS 2H-Benzimidazol-2-one, 1,3-dihydro-5-pentyl- (CA INDEX NAME)

RN

106429-57-6 CAPLUS
1H-Benzimidazole-5-carboxylic acid, 2,3-dihydro-2-oxo-, methyl ester (CA CN INDEX NAME)

634602-82-7 CAPLUS 1H-Benzimidazole-5-carboxylic acid, 2,3-dihydro-2-oxo-, pentyl ester (CA INDEX NAME)

634602-83-8 CAPLUS 1H-Benzimidazole-5-carboxylic acid, 2,3-dihydro-2-oxo-, 2-(2-hydroxyethoxy)ethyl ester (CA INDEX NAME)

634602-84-9 CAPLUS
1H-Benzimidazole-5-carboxylic acid, 2,3-dihydro-2-oxo-, ethyl ester (CA INDEX NAME)

634602-86-1 CAPLUS L-Serine, N-[(2,3-dihydro-2-oxo-1H-benzimidazol-5-yl)carbonyl]- (CA

Absolute stereochemistry.

634602-88-3 CAPLUS L-Phenylalanine, N-[(2,3-dihydro-2-oxo-1H-benzimidazo1-5-y1)carbonyl]-(CA INDEX NAME)

Absolute stereochemistry.

634602-89-4 CAPLUS 1H-Benzimidazole-5-carboxamide, N-[2-(3,4-dihydroxyphenyl)ethyl]-2,3-dihydro-2-oxo- (CA INDEX NAME)

L13 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2010 ACS on STN (Continued)

634602-95-2 CAPLUS 2H-Benzimidazol-2-one, 4,5,7-tribromo-1,3-dihydro-6-methyl- (CA INDEX NAME)

634602-96-3 CAPLUS Acetamide, N-(2,3-dihydro-6-methyl-2-oxo-1H-benzimidazol-5-yl)-2-(2-pyrimidinylthio)- (CA INDEX NAME)

634602-97-4 CAPLUS 1H-Benzimidazole-5-carbothioic acid, 2,3-dihydro-2-oxo-, S-pentyl ester (CA INDEX NAME)

634603-00-2 CAPLUS 1H-Benzimidazole-5-carboximidamide, N-butyl-2,3-dihydro-2-oxo- (CA INDEX NAME)

L13 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2010 ACS on STN

634602-91-8 CAPLUS $\beta\text{-D-Glucopyranose, 2,3,4,6-tetraacetate} \\ 1-(2,3-\text{dihydro-2-oxo-1H-benzimidazole-5-carboxylate}) \qquad \text{(CA INDEX NAME)}$

(Continued)

Absolute stereochemistry.

634602-92-9 CAPLUS 2H-Benzimidazol-2-one, 5-bromo-1,3-dihydro-6-methyl- (CA INDEX NAME)

634602-93-0 CAPLUS 2H-Benzimidazol-2-one, 1,3-dihydro-5-hydroxy-6-methyl- (CA INDEX NAME)

634602-94-1 CAPLUS 2H-Benzimidazol-2-one, 1,3-dihydro-5-tridecyl- (CA INDEX NAME)

L13 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2010 ACS on STN (Continued)

OS.CITING REF COUNT: RECORD

THERE ARE 1 CAPLUS RECORDS THAT CITE THIS

(1 CITINGS)
THERE ARE 17 CITED REFERENCES AVAILABLE FOR

REFERENCE COUNT: THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE

FORMAT

L13 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2010 ACS on STW
ACCESSION NUMBER: 2003:972178 CAPLUS
DOCUMENT NUMBER: 140:35946
TITLE: CFT modifier genes and expressed proteins, in particular Kir4.2, and their regulators, useful in treating cystic fibrosis and methods and products for detecting and/or identifying same Whitsett, Jeffrey Allen; Aronow, Bruce Jefferson; Clark, Jean Cantwell
PATENT ASSIGNEE(S): Children's Hospital Medical Center, USA FOT Int. Appl., 80 pp.
CODEN: FIXMD2
DOCUMENT TYPE: Patent
LANGUAGE: Patent
LANGUAGE: Emclish

DOCUMENT TYPE: LANGUAGE: English

FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

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| | | CENT : | | | | | | | | | | | | | | | ATE | |
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| | | 2003 | | | | | | | | | | | | | | | | |
| | WO | 2003 | 1021 | 40 | | A3 | | 2004 | 0610 | | | | | | | | | |
| | | W: | AE, | AG, | AL, | AM, | AT, | AU, | AZ, | BA, | BB, | BG, | BR, | BY, | BZ, | CA, | CH, | CN, |
| | | | co, | CR, | CU, | CZ, | DE, | DK, | DM, | DZ, | EC, | EE, | ES, | FI, | GB, | GD, | GE, | GH, |
| | | | GM, | HU, | ID, | IL, | IN, | IS, | JP, | KE, | KG, | KP, | KR, | KZ, | LC, | LK, | LR, | LS, |
| | | | LT, | LU, | LV, | MA, | MD, | MG, | MK, | MN, | MW, | MX, | MZ, | NO, | NZ, | OM, | PH, | PL, |
| | | | PT, | RO, | RU, | SC, | SD, | SE, | SG, | SK, | SL, | TJ, | TM, | TN, | TR, | TT, | TZ, | UA, |
| | | | UG, | US, | UZ, | VC, | VN, | YU, | ZA, | ZM, | ZW | | | | | | | |
| | | RW: | GH, | GM, | KE, | LS, | MW, | MZ, | SD, | SL, | SZ, | TZ, | UG, | ZM, | ZW, | AM, | AZ, | BY, |
| | | | | | | | | TM, | | | | | | | | | | |
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| | | 2488 | | | | | | | | | | | | | | | | |
| | | 2003 | | | | | | | | | | | | | | | | |
| | EP | 1513 | | | | | | | | | | | | | | | | |
| | | R: | | | | | | ES, | | | | | | | | | | |
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| | | 1671 | | | | | | | | | | | | | | | | |
| | | 2005 | | | | | | | | | | | | | | | | |
| | | 2005 | | | | | | 2005 | 0721 | | | | | | | | | |
| OI. | RIT: | APP: | LN. | INFO | . : | | | | | | US 2 | 002- | 3848 | 55P | 1 | P 2 | 0020 | 531 |
| | | | | | | | | | | | US 2 | 002- | 3848 | 56P | 1 | P 2 | 0020 | 531 |
| | | | | | | | | | | | WO 2 | 003- | US16 | 896 | 1 | W 2 | 0030 | 530 |

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
AB The invention relates to CFTR modifier genes, in particular the Kir4.2
gene, as well as their expressed proteins, that are useful in treating
cystic fibrosis (CF), or at least the conditions that cause CF. It has
been found that Kir4.2 able to compensate for the absence of CFTR. The
Kir4.2 gene influences and potentiates chloride (C1) ion transportation
by

providing potassium (K+) channel(s) as an alternative pathway(s). In addition, it has been found that the expressed polypeptide(s) of the Kir4.2

gene that provide these K+ channel(s) can be activated and/or regulated

response to various agents, such as cAMP stimulating agents (e.g., forskolin and IBMX) that stimulate Cl ion transportation via CTTR-dependent channels. Methods and products for detecting and/or control of the contr

L13 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2010 ACS on STN (Continued) identifying CFTR modifier genes, their resp. expressed polypeptides, the genetic regulators of such CFTR modifier genes, and the regulators of their resp. expressed polypeptides are disclosed. Also disclosed are compas. and methods using these CFTR modifier genes, their resp. expressed

engreesed polypeptides, genetic regulators of these CFTR modifier genes, and/or CFTR

modifier polypeptide regulators for the purpose of treating CF, or at least the conditions that cause CF, are disclosed. 141797-92-4, NS 004
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(NS 004); CTFR modifier genes and expressed proteins, in particular KIr4.2, and their regulators, useful in treating cystic fibrosis and methods and products for detecting and/or identifying same) 141797-92-4 CAPLUS (CAPLUS CAPLUS CAPLUS

141/3/-92-4 CAPLUS
2H-Benzimidazol-2-one, 1-(5-chloro-2-hydroxyphenyl)-1,3-dihydro-5-(trifluoromethyl)- (CA INDEX NAME)

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COST IN U.S. DOLLARS | SINCE FILE
ENTRY | TOTAL
SESSION |
|--|---------------------|------------------|
| FULL ESTIMATED COST | 67.27 | 451.07 |
| DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) | SINCE FILE
ENTRY | TOTAL
SESSION |
| CA SUBSCRIBER PRICE | -5.95 | -5.95 |

STN INTERNATIONAL LOGOFF AT 13:29:47 ON 20 JAN 2010